CLAIMS

What is claimed is:

1. An alcohol-free foamable pharmaceutical or cosmetic carrier, comprising:

(a) a foamable composition comprising:

about 2-75% by weight of composition of a liquid, non-volatile hydrophobic solvent;

about 80-98% by weight of composition of water;

about 0.1% to 5% by weight of composition of a foam adjuvant agent selected from the group consisting of fatty alcohols, fatty acids, hydroxyl-substituted fatty alcohols, hydroxyl-substituted fatty acids, and fatty acids and fatty alcohols including at least one double bond in its carbon atom chain;

about 0.1% to 5% by weight of composition of a surface-active agent; and

about 0.1% to 5% by weight of composition of a water gelling agent.

and

(b) a liquefied or compressed gas propellant in a container,

which upon release provides a breakable foam suitable for topical or muscosal administration.

2. The foamable carrier of claim 1, wherein the hydrophobic solvent comprises about 5-10% by weight of composition.

3. The foamable carrier of claim 1, wherein the hydrophobic solvent comprises about 10-20% by weight of composition.

4. The foamable carrier of claim 1, wherein the hydrophobic solvent comprises about 20-75% by weight of composition.

5. The foamable carrier of claim 1, wherein the hydrophobic solvent comprises a mixture of mineral oil and an emollient in a ratio between 2:8 and 8:2 on a weight basis.

6. The foamable carrier of claim 1, wherein at least 2% of the foamable composition is a silicone oil.

7. The foamable carrier of claim 1, wherein the surface-active agent is selected from the groups of non ionic surfactants, cationic surfactants, amphoteric and zwitterionic surfactants.

8. The foamable carrier of claim 1, wherein the surface-active agent is a mixture of a non ionic surfactant and an anionic surfactant in a 20:1 to 1:1 ratio.

9. The foamable carrier of claim 1, wherein the surface-active agent is a mixture of a non-ionic surfactant and an ionic surfactant in a 100:1 to 6:1 ratio.

10. The foamable carrier of claim 1, wherein the surface-active agent consists essentially of one or more non-ionic surfactants.

11. The foamable carrier of claim 1, wherein the surface-active agent has HLB value of more than 9.

12. The foamable carrier of claims 7, 8, 9, or 10, wherein the non-ionic surfactant comprises a sucrose ester.

13. The foamable carrier of claim 1, wherein the hydrophobic solvent is selected from the group comprising vegetable oils, marine oils, mineral oils, emollients, silicone oils, plant-derived therapeutic oils and mixture thereof.

14. The foamable carrier of claim 1, wherein the combined amount of foam adjuvant agent, surface-active agent and water gelling agent is less than about 8% (w/w).

15. The foamable carrier of claim 1, wherein the combined amount of foam adjuvant agent, surface-active agent and water gelling agent is less than about 5% (w/w) of the foamable composition.

16. A pharmaceutical or cosmetic composition, comprising:
(a) a foamable composition comprising:
about 2-75% by weight of composition of a liquid, non-volatile hydrophobic solvent;
about 80-98% by weight of composition of water;
about 0.1% to 5% by weight of composition of a foam adjuvant agent selected from the group consisting of fatty alcohols, fatty acids, hydroxyl-substituted fatty alcohols, hydroxyl-substituted fatty acids, and fatty acids and fatty alcohols including at least one double bond in its carbon atom chain;
about 0.1% to 5% by weight of composition surface-active agent; and
about 0.1% to 5% by weight of composition water gelling agent;
(b) a therapeutically effective amount of an active agent;
and
(c) a liquefied or compressed gas propellant in a container,
which upon release provides a breakable foam suitable for topical or muscasol administration.

17. The pharmaceutical or cosmetic composition of claim 16, wherein the hydrophobic solvent comprises about 5-10% by weight of composition.

18. The pharmaceutical or cosmetic composition of claim 16, wherein the hydrophobic solvent comprises about 10-20% by weight of composition.

19. The pharmaceutical or cosmetic composition of claim 16, wherein the hydrophobic solvent comprises about 20-75% by weight of composition.

20. The pharmaceutical or cosmetic composition of claim 16, wherein the active agent is a drug.

21. The pharmaceutical or cosmetic composition of claim 16, wherein the active agent is a cosmetically effective agent.

22. The pharmaceutical or cosmetic composition of claim 16, wherein the hydrophobic solvent is selected from the group comprising vegetable oils, marine oils, mineral oils, emollient, silicone oils, plant-derived therapeutic oils and mixture thereof at any proportion.

23. The pharmaceutical or cosmetic composition of claim 16, further comprising excipients selected from the group consisting of antioxidants, humectants, flavoring, colorant and odorant agents.

24. The pharmaceutical or cosmetic composition of claim 16, wherein the hydrophobic solvent comprises a mixture of mineral oil and an emollient in a ratio between 2:8 and 8:2 on a weight basis.

25. The pharmaceutical or cosmetic composition of claim 16, wherein at least 2% of the composition is a silicone oil.

26. The pharmaceutical or cosmetic composition of claim 16, wherein the surface-active agent is a mixture of a non ionic surfactant and an anionic surfactant in a 20:1 to 1:1 ratio.

27. The pharmaceutical or cosmetic composition of claim 16, wherein the surface-active agent consists essentially of one or more non-ionic surfactants.

28. The pharmaceutical or cosmetic composition of claim 16, wherein the surface-active agent is a mixture of a non-ionic surfactant and an ionic surfactant in a 100:1 to 6:1 ratio.

29. The pharmaceutical or cosmetic composition of claim 16, wherein the combined amount of foam adjuvant agent, surface active agent and water gelling agent is less than about 8% (w/w).

30. The composition of claim 16, further comprising an effective concentration of a penetration enhancer.

31. The pharmaceutical or cosmetic composition of claim 16, wherein the combined amount of foam adjuvant agent, surface active agent and water gelling agent is less than about 5% (w/w).

32. The pharmaceutical or cosmetic composition of claim 20 wherein the drug is selected for the treatment of a disease, the etiology of which is bacterial, fungal, viral, parasitic, inflammatory, autoimmune, allergic, hormonal, malignant and combinations thereof.

33. The pharmaceutical or cosmetic composition of claim 20, wherein the drug is selected for the treatment of a superficial condition.

34. The composition of claim 20, wherein the drug is selected for the treatment of a disorder of the skin, mucosal membrane, vagina and rectum.

35. The composition of claim 20, wherein the drug is selected for the treatment of a disorder, selected from the group of dermatosis, dermatitis, bacterial Infections, fungal Infections, parasitic infections, viral infections, disorders of hair follicles and sebaceous glands, acne, rosacea, scaling papular diseases, benign tumors, malignant tumors, reactions to sunlight, bullous diseases, pigmentation disorders, disorders of cornification, pressure sores, disorders of sweating, inflammatory reactions, xerosis, ichthyosis, allergy, burn, wound, cut, and non-dermatological disorders, which respond to transdermal delivery of said drug.

36. The composition of claim 20 wherein the drug is selected for the treatment of wounds, burns, cuts and ulcers.

37. The composition of claim 20 wherein the drug is antibacterial.

38. The composition of claim 20 wherein the drug is antifungal.

39. The composition of claim 20 wherein the drug is antiviral.

40. The composition of claim 20 wherein the active agent is an insecticide.

41. The composition of claim 20 wherein the active agent is an insect repellent.

42. The composition of claim 20, wherein the drug is an anti-inflammatory or antiallergic agent.

43. The composition of claim 20, wherein the drug is an anticancer agent.

44. The composition of claim 20, wherein the drug is a photodynamic therapy agent.

45. The composition of claim 20 wherein the drug is a local anesthetic.

46. The composition of claim 20 wherein the drug is a nonsteroidal anti-inflammatory drug (NSAID)

47. The composition of claim 21, wherein the active agent is a retinoid.

48. The composition of claim 21, wherein the active agent is an anti-wrinkle agent.

49. The composition of claim 20 or 21, wherein the active agent is a skin-whitening agent.

50. The composition of claim 20 or 21, wherein said active agent is selected from the group comprising sulfur-containing amino acids, thiol compounds, alpha hydroxy acids, lactic acid and its derivatives and salts, glycolic acid and its derivatives and salts, beta-hydroxy acids, salicylic acid and salicylic acid salts and derivatives, phytic acid, lipoic acid, lysophosphatidic acid, skin peel agents, phenol, resorcinol, vitamin B3 compounds, niacinamide, nicotinic acid and nicotinic acid salts and esters, tocopheryl nicotinate, nicotinyl amino acids, nicotinyl alcohol esters of carboxylic acids, nicotinic acid N-oxide and niacinamide N-oxide, retinoids, retinol, retinal, retinoic acid, retinyl acetate, retinyl palmitate ,retinyl ascorbate, caffeine, theophiline, pentoxyphilline, dihydroxy acetone kojic acid, arbutin, nicotinic acid and its precursors, salts and derivatives, arbutin, ascorbic acid and salts and derivatives thereof.

51. The composition of claim 20 or 21, wherein the active agent is an herbal extract.

52. The composition of claim 20 or 21, wherein the active agent is a radical scavenger.

53. The composition of claim 21, wherein the active agent is a self-tanning agent.

54. The composition of claim 20 or 21, wherein the active agent is an anti-acne active agent.

55. The composition of claim 20 or 21, wherein the active agent is a skin whitening agent.

56. The composition of claim 20 or 21 wherein the active agent is a figure forming agent.

57. The composition of claim 21, wherein the active agent is an agent that influences hair growth.

58. The composition of claim 21, wherein the active agent is a hair growth stimulating agent.

59. The composition of claim 21, wherein the active agent is a hair growth inhibiting agent.

60. The composition of claim 16, further comprising a sunscreen agent.

61. The composition of claim 16, further comprising an inorganic sunscreen agent.

62. The composition of claim 16, wherein the active agent is a combination of a skin whitening agent and a sunscreen agent.

63. The composition of claim 16, wherein the active agent is a combination of a skin whitening agent and an inorganic sunscreen agent.

64. The composition of claim 20 wherein the drug is intended for transdermal delivery.

65. The composition of claim 16, further comprising a decontaminating agent selected from the group comprising an oxidizing agent, iodine and iodine compounds, chlorohexidine, bleaching agents and surface-active agents.

66. A method of treating, alleviating or preventing a dermatological disorder, comprising:

administering topically to a subject having said dermatological disorder a therapeutically effective amount of a breakable foam composition comprising:

(a) a foamable composition comprising:

about 2-75% by weight of composition of a liquid, non-volatile hydrophobic solvent;

about 80-98% by weight of composition of water;

about 0.1% to 5% by weight of composition of a foam adjuvant agent selected from the group consisting of fatty alcohols, fatty acids, hydroxyl-substituted fatty alcohols, hydroxyl-substituted fatty acids, and fatty acids and fatty alcohols including at least one double bond in its carbon atom chain;

about 0.1% to 5% by weight of composition of a surface-active agent; and

about 0.1% to 5% by weight of composition of a water gelling agent.

(b) at least one active agent, which is intended to prevent, alleviate or cure said disorder; and

(c) a liquefied or compressed gas propellant.

67. The method of claim 66, wherein at least 2% of the composition is a silicone oil.

68. The method of claim 66, wherein the hydrophobic solvent comprises a mixture of mineral oil and an emollient in a ratio between 2:8 and 8:2 on a weight basis.

69. The method of claim 66, wherein the surface-active agent is selected from the groups of non-ionic surfactants, cationic surfactants, amphoteric and zwitterionic surfactants.

70. The method of claim 66, wherein the surface-active agent is a mixture of a non-ionic surfactant and an anionic surfactant in a 1:1 to 20:1 ratio.

71. The method of claim 66, wherein the surface-active agent is non-ionic.

72. The method of claim 66, wherein the surface-active agent has HLB value of more than 9.

73. The method of claim 66, wherein the non-ionic surfactant comprises a sucrose ester.

74. The method of claim 66, wherein the drug is intended for the treatment of a disease, the etiology of which is bacterial, fungal, viral, parasitic, inflammatory, autoimmune, allergic, hormonal, malignant and combinations thereof.

75. The method of claim 66, wherein the drug is selected from the group comprising antibacterial, antifungal, anti-inflammatory, antiallergic, nonsteroidal anti-inflammatory, retinoid, alpha hydroxy acid, beta hydroxy acid, keratolytic, antiproliferative, anticancer and anti-pigmentation drugs.

76. The method of claim 66, wherein the drug is selected from the group comprising an insecticide of an insect repellent.

77. The method of claim 66, wherein said compound is applied topically to an affected area.

78. The method of claim 66, wherein said dermatological disorder comprises dermatosis, dermatitis, bacterial Infections, fungal Infections, parasitic infections, viral infections, disorders of hair follicles and sebaceous glands, scaling papular diseases, benign tumors, malignant tumors, reactions to sunlight, bullous diseases, pigmentation disorders, disorders of cornification, pressure sores, disorders of sweating, inflammatory reactions, xerosis, ichthyosis, allergy, burn, wound, cut, and non-dermatological disorders, which respond to transdermal delivery of said active agent.

79. The method of claim 66, wherein the active agent is a figure forming agent.

80. The method of claim 66, wherein the active agent is an agent that influences hair growth.

81. The method of claim 66, wherein the active agent is a hair growth stimulating agent.

82. The method of claim 66, wherein the active agent is a hair growth inhibiting agent.

83. The method of claim 66, further comprising a sunscreen agent.

84. The method of claim 66, further comprising an inorganic sunscreen agent.

85. The method of claim 66, wherein the active agent is a combination of a skin whitening agent and a sunscreen agent.

86. The method of claim 66, wherein the active agent is a combination of a skin whitening agent and an inorganic sunscreen agent.

87. The method of claim 66, comprising an effective concentration of a penetration enhancer.